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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/577,598

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Carsten Andersen

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EXAMINER

CHOI, PETER Y

ART UNIT

PAPER NUMBER

1794

NOTIFICATION DATE

DELIVERY MODE

03/16/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/577,598	<b>Applicant(s)</b> ANDERSEN, CARSTEN	
	<b>Examiner</b> PETER Y. CHOI	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-13 is/are pending in the application.
- 4a) Of the above claim(s) 10 and 12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-9, 11 and 13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 7, 9, 11, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,642,601 to Thompson Jr., in view of USPN 5,516,580 to Frenette and USPN 4,118,531 to Hauser.

Regarding claims 1-5, 7, 9, 11, and 13, Thompson Jr. teaches a fiber insulation material for the manufacture of nonwovens comprising primary fiber components of a portion of 75% cellulose fibers, a portion of 15% synthetic fibers being crimped fibers, and a portion of 10% bi-component fibers comprising a core and an outer sheathing, the outer sheathing having a lower melting point than the core (Thompson Jr., column 1 line 5 to column 2 line 67, column 6 lines 5-13, column 8 line 38 to column 9 line 6, column 9 line 63 to column 10 line 11, column 13 line 63 to column 14 line 23, column 15 lines 30-67, column 22 line 45 to column 23 line 24). It should be noted that the springy fibers of the prior art appear to be within the scope of the crimped and helically shaped crimped fibers.

Regarding claims 1-5, 7, 9, 11, and 13, the prior art does not appear to specifically teach the length of the cellulose fibers and the bi-component fibers and the weight of the resulting material. Since the cellulose fibers and the bi-component fibers necessarily comprise fiber lengths and the resulting material necessarily comprises a weight, and since the prior art is silent

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as to each of the fiber lengths and material weight, it would have been necessary and therefore obvious to look to the prior art for conventional fiber lengths and material weights. Frenette provides this conventional teaching, showing that it was known in the insulation material art to form an insulating material comprising cellulosic fibers and synthetic fibers, wherein the cellulosic fibers have a length from about 1 mm to about 4 mm, the bicomponent fibers have a length longer than 4 mm, and wherein the resulting material has a density of 2 lb/cu.ft. or 1.5 lb/cu.ft. (Frenette, column 1 lines 7-12, column 2 lines 3-32, column 3 line 4 to column 4 line 6). It would have been obvious to one of ordinary skill in the insulation art at the time the invention was made to form the insulating material of the prior art, with the fiber lengths and material weight, as taught by Frenette, motivated by the desire of forming a conventional fiber insulation material with bicomponent fiber lengths and a material weight known in the insulation art to be predictably suitable in forming fire retardant fiber insulation materials. It should be noted that in the case where the claimed ranges overlap or lie inside ranges disclosed by the prior art, a prima facie case of obviousness exists.

Regarding claims 1-5, 7, 9, 11, and 13, the prior art does not appear to specifically teach the length of the crimped fibers. Since the crimped fibers necessarily comprise fiber lengths, and since the prior art is silent as to the fiber length, it would have been necessary and therefore obvious to look to the prior art for conventional fiber lengths. Hauser provides this conventional teaching, showing that it was known in the fiber insulation material art to form a fiber insulation material comprising synthetic polyester helically shaped crimped fibers having a length between about 2 and 15 centimeters (Hauser, column 1 lines 11-32, column 2 lines 3-21, column 3 lines 31-68, column 5 lines 31-47, column 6 lines 35-59, column 7 lines 27-60). Hauser teaches that

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forming a web with such fibers adds resiliency, loft and compression resistance to the web.

Similarly, Thompson teaches that the springy synthetic polyester fibers are resilient and provide bulk or loft to the insulation material (Thompson, column 15 lines 30-36). Therefore, it would have been obvious to one of ordinary skill in the fiber insulation material art at the time the invention was made to form the insulating material of the prior art, wherein the springy polyester fibers are the synthetic polyester helically shaped crimped fibers having a length between about 2 and 15 centimeters, as taught by Hauser, motivated by the desire of forming a conventional fiber insulation material with synthetic polyester fibers known in the fiber insulation material art to predictably improve the resiliency, loft and compression resistance of the fiber insulation material. It should be noted that in the case where the claimed ranges overlap or lie inside ranges disclosed by the prior art, a prima facie case of obviousness exists.

It should be noted that the limitation directed to a fiber insulation material “for the manufacture of a non-woven fiberboard material” is recited in the preamble and is interpreted as an intended use of the insulation material. A preamble is generally not accorded any patentable weight where it merely recites the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the structural limitations are able to stand alone. Since the prior art combination teaches a substantially similar structure and composition (a fiber insulation material comprising the claimed cellulose fibers, crimped fibers and bicomponent fibers, each of the fibers having the claimed lengths and each of the fibers present in the claimed amounts) as the claimed invention, the prior art appears capable of performing the claimed use.

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Regarding claim 2, the prior art teaches that the synthetic fibers are provided with fire-retarding chemical (Thompson Jr., column 13 line 63 to column 14 line 23, column 15 lines 30-67, column 22 line 45 to column 23 line 24). It should be noted that the prior art teaches the benefits of applying fire retardant chemical to the resulting material when additional penetration of the liquid fire retardant chemical is needed. Therefore, the synthetic fibers are provided with fire-retarding chemical. Additionally and/or alternatively, it would have been obvious to one of ordinary skill in the insulating material art at the time the invention was made to form the insulating material of the prior art, wherein the synthetic fibers are provided with fire-retarding chemical, as the prior art suggests that additional fire resistance may be imparted to the fibers constituting the insulating material by adding liquid fire retardant chemical to the insulating material, and motivated by the desire of forming a conventional insulating material having the desired fire resistance suitable for the intended application, as providing the synthetic fibers with fire retardant chemical additionally predictably increases the fire resistance of the resulting insulating material.

Regarding claim 3, the prior art teaches that the cellulose fibers are saturated with the fire-retarding chemical (Thompson Jr., column 9 line 63 to column 10 line 11, column 13 line 63 to column 14 line 23, column 15 lines 30-67, column 22 line 45 to column 23 line 24).

Regarding claims 4 and 13, Thompson does not appear to teach that the content of the fire-retarding chemical is between 1 and 30% of the total fiber material composition and that the fire-retarding chemical comprises at least one of Borax, Boric acid, Ammonium sulphate and aluminum sulphate mixed with the synthetic fibers. However, Thompson teaches that any suitable fire retardant chemical can be applied, for example, a boron composition (Thompson,

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column 8 line 37 to column 9 line 6). Since Thompson is silent as to the specific fire retarding chemical and the amount of chemical that is applied, it would have been necessary and therefore obvious to look to the prior art for conventional fire retardant chemicals and amounts. Frenette provides this conventional teaching, showing that it was known in the insulation material art to form an insulating material comprising cellulosic fibers and synthetic fibers, wherein a fire retardant chemical such as borax, boric acid, ammonium sulphate or aluminum sulfate is typically added at 10 to 30% (Frenette, column 1 lines 7-12, column 2 lines 3-32, column 3 line 4 to column 4 line 6). It would have been obvious to one of ordinary skill in the insulation art at the time the invention was made to form the insulating material of the prior art, with the fire retardant chemical and in the amounts, as taught by Frenette, motivated by the desire of forming a conventional fiber insulation material with fire retardant chemicals and in amounts known in the insulation art to be predictably suitable in forming fire retardant fiber insulation materials.

Regarding claim 5, the prior art teaches that the cellulose fibers having a length between about 1 mm to about 4 mm (Frenette, column 1 lines 7-12, column 2 lines 3-32, column 3 line 4 to column 4 line 6).

Regarding claim 7, the prior art teaches that the fiber board material is manufactured with a grammar weight of 2 lb/cu.ft. or 1.5 lb./cu.ft. (Frenette, column 1 lines 7-12, column 2 lines 3-32, column 3 line 4 to column 4 line 6). Additionally, it should be noted that a fiber board material is not positively claimed, as the claimed invention is directed to a fiber insulation material, and the claimed fiber insulation material is not required to have the claimed grammar weight. The claim only requires that *when* the fiber insulation is used for the manufacture of a nonwoven fiberboard material, the grammar weight will comprise the claimed grammar weight.

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Therefore, the claimed limitation is additionally interpreted as an intended use limitation. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Since the prior art combination teaches a substantially similar structure and composition (a fiber insulation material comprising the claimed cellulose fibers, crimped fibers and bicomponent fibers, each of the fibers having the claimed lengths and each of the fibers present in the claimed amounts) as the claimed invention, the prior art appears capable of performing the claimed use.

Regarding claim 9, the prior art teaches that the crimped synthetic fibers are helically shaped (Hauser, column 1 lines 11-32, column 2 lines 3-21, column 3 lines 31-68, column 5 lines 31-47, column 6 lines 35-59, column 7 lines 27-60). Additionally and/or alternatively, it would have been obvious to one of ordinary skill in the fiber insulation material art at the time the invention was made to form the insulating material of the prior art, wherein the springy polyester fibers are the synthetic polyester helically shaped crimped fibers, as taught by Hauser, motivated by the desire of forming a conventional fiber insulation material with synthetic polyester fibers known in the fiber insulation material art to predictably improve the resiliency, loft and compression resistance of the fiber insulation material.

Regarding claim 11, the prior art teaches that the bicomponent fibers have a length of longer than 4 mm (Frenette, column 1 lines 7-12, column 2 lines 3-32, column 3 line 4 to column 4 line 6). It should be noted that Applicants' specification does not quantitatively and/or objectively define the scope of "approximately." Absent evidence to the contrary that the fiber



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length of the prior art is necessarily outside the scope of the claimed fiber length, the fiber length of the prior art appears to be within the scope of the claimed invention. Additionally, it would have been obvious to one of ordinary skill in the insulating material art at the time the invention was made to form the insulating material of the prior art, further varying the fiber lengths such that the fiber lengths are approximately 3 mm, as it is within the level of ordinary skill to determine a suitable fiber length based on the desired fiber process used and the desired level of bonding and structural integrity suitable for the intended application.

Regarding claim 13, the fire-retarding chemical comprises borax, boric acid, ammonium sulphate or aluminum sulfate mixed with the synthetic fibers (Thompson Jr., column 13 line 63 to column 14 line 23, column 15 lines 30-67, column 22 line 45 to column 23 line 24; Frenette, column 1 lines 7-12, column 2 lines 3-32, column 3 line 4 to column 4 line 6).

3. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson Jr. in view of Hauser and Frenette, as applied to claims 1-5, 7, 9, 11, and 13 above, and further in view of USPN 5,858,530 to McCullough.

Regarding claim 8, the prior art does not appear to teach that the synthetic fibers are hollow. Since the prior art is silent as to the exact structure of the synthetic fibers, it would have been necessary and therefore obvious to look to the prior art for conventional synthetic fiber structures in the fiber insulation material art. McCullough provides this conventional teaching showing that it was known in the fiber insulation art to form a fiber insulation material comprising synthetic fibers and natural fibers, wherein the synthetic fibers are crimped and/or hollow (McCullough, column 1 lines 8-36, column 9 lines 19-43, column 19 lines 20-30, column

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23 lines 1-35). It would have been obvious to one of ordinary skill in the fiber insulation material art to form the insulating material of the prior art, wherein the synthetic fibers are hollow, as taught by McCullough, motivated by the desire of forming a conventional fiber insulation material with hollow fibers which were known in the fiber insulation material art to predictably result in flexible fibers which are cheaper without sacrificing performance.

### ***Response to Arguments***

4. Applicant's arguments filed October 29, 2009, have been fully considered but they are not persuasive. It should be noted that due to Applicant's amendments, Applicant's arguments with respect to claims 1-3 and 9 have been considered but are moot in view of the new grounds of rejection. However, to the extent that Applicants' arguments still apply to the current rejection, they are addressed below.

Applicant argues that Frenette teaches away from any overlap between the length of the cellulose fibers. Examiner respectfully disagrees. The use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art, relevant for all they contain. A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments. MPEP 2123. Additionally, in the case where the claimed ranges overlap or lie inside ranges disclosed by the prior art, a prima facie case of obviousness exists.

As set forth above, the prior art does not appear to specifically teach the length of the cellulose fibers and the bi-component fibers and the weight of the resulting material. Since the

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cellulose fibers and the bi-component fibers necessarily comprise fiber lengths and the resulting material necessarily comprises a weight, and since the prior art is silent as to each of the fiber lengths and material weight, it would have been necessary and therefore obvious to look to the prior art for conventional fiber lengths and material weights. Frenette provides this conventional teaching, showing that it was known in the insulation material art to form an insulating material comprising cellulosic fibers and synthetic fibers, wherein the cellulosic fibers have a length from about 1 mm to about 4 mm, the bicomponent fibers have a length longer than 4 mm, and wherein the resulting material has a density of 2 lb/cu.ft. or 1.5 lb./cu.ft. (Frenette, column 1 lines 7-12, column 2 lines 3-32, column 3 line 4 to column 4 line 6). It would have been obvious to one of ordinary skill in the insulation art at the time the invention was made to form the insulating material of the prior art, with the fiber lengths and material weight, as taught by Frenette, motivated by the desire of forming a conventional fiber insulation material with bicomponent fiber lengths and a material weight known in the insulation art to be predictably suitable in forming fire retardant fiber insulation materials. Since the claimed fiber length ranges overlap with the fiber length ranges disclosed by the prior art, the claimed fiber length ranges are rendered obvious over the prior art.

Applicant argues that unexpected results stem from the claimed fiber lengths, allowing for a more efficient use of the bicomponent fibers, which is advantageous with regard to production costs and obtaining a voluminous fiber product with good spring elastic properties. Examiner respectfully disagrees. It should be noted that Applicant is only reciting the specification as originally filed in support of Applicant's arguments of unexpected results. However, it is well-settled that unsupported arguments are not a substitute for objective

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evidence, and Applicant has not provided evidence that any results are unexpected.

Additionally, advantageous production costs and voluminous fiber products with good spring elastic properties are not claimed. Therefore, Applicant's arguments are not commensurate in scope with the claimed invention. Additionally, the claiming of a new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. There is no requirement that a person of ordinary skill in the art would have recognized the inherent disclosure at the time of invention, but only that the subject matter is in fact inherent in the prior art reference. Since the prior art combination teaches a substantially similar structure and composition (a fiber insulation material comprising the claimed cellulose fibers, crimped fibers and bicomponent fibers, each of the fibers having the claimed lengths and each of the fibers present in the claimed amounts) as the claimed invention, the prior art renders obvious the claimed invention.

Applicant argues that none of Thompson, Hauser, Frenette or McCullough, or combinations of the references teach the claimed invention. Examiner respectfully disagrees. for the reasons set forth above, the prior art renders obvious the claimed invention.

### ***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PETER Y. CHOI whose telephone number is (571)272-6730. The examiner can normally be reached on Monday - Friday, 08:00 - 15:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on (571) 272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Peter Y Choi/  
Examiner, Art Unit 1794

/Andrew T Piziali/  
Primary Examiner, Art Unit 1794